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THE
LIGHTNING CALCULATOR:

A
New, Readable, and Valuable Book,

CONTAINING

THREE NEW PROCESSES OF ADDITION, FOUR NEW FORMS
OF MULTIPLICATION, RAPID PROCESSES OF SQUARING
AND CUBING, SUBTRACTION AND DIVISION, HIS
IMPROVED FORM OF INTEREST, AND VALU-
ABLE INFORMATION IN BOOK-KEEPING;

TOGETHER WITH

A HISTORY OF HIS REMARKABLE LIFE, HIS WONDERFUL
DISCOVERIES IN NUMBERS, HIS AMUSING AND
INSTRUCTIVE PARLOR FEATS, ETC.,
WITH HIS AUTOGRAPH.

JUST ISSUED BY

PROFESSOR HUTCHINGS.



New York :
CLARRY & REILLEY, PRINTERS AND ENGRAVERS,
Nos. 12 & 14 SPRUCE STREET.
1867.

A BRIEF HISTORY OF MY EVENTFUL LIFE.

I was born in the City of New York, at the corner of Eldridge and Hester streets, on Saturday, January 7th, 1832. My father was a Long Island man and my mother a Connecticut woman. My father was for many years a wholesale and retail merchant in New York City. I will say here, in passing, that at Hubbs & Clark's Academy, where I graduated, I showed some little ability—more than ordinary—in figures; but I will also say that I attribute my present skill in figures to careful research and untiring perseverance on my part, and I earnestly commend my readers to perfect diligence and thorough practice as the surest road to success. I was for some years a book-keeper in my father's counting-room, but it was not until some three years since that my attention was particularly called to figures. I have in my present work embodied the various short processes that I have gathered together in the last three years; and as far as short processes and rapidity of execution go, I do most heartily commend it to the public, as by far the best work ever published on this subject.

WM. S. HUTCHINGS.

A GUIDE
TO
Rapid and Accurate Computation,
BY
PROFESSOR HUTCHINGS,

THE MATHEMATICAL PHENOMENON AND LIGHTNING CALCULATOR.

N.B.—It is particularly understood that the possessor of this secret has pledged his or her honor not to divulge the contents of the following lines to any other person or persons, but rather induce them to obtain it from the discoverer, Professor Hutchings, for the same price which has been paid by the owner of this copy.

P R E F A C E .

Few things are impossible to the human mind. The spark of intellect with which the Creator has endowed us all may be fanned into a large flame by cultivation, practical experience, and application. The act of computation, or addition, more so than any other, is accessible to every one possessed of a vigorous and active mind, and every one may be enabled to cast up figures or add sums together with lightning velocity by observing a few rules established by the Professor, after a close study of the figures, and some not overhard practice. There is a way of doing a thing well and to the purpose, and this applies more particularly to computation. This way will be indicated distinctly in the following lines, and all that will astonish the reader will be the fact that the simplicity and practicability of these few rules has not found its way long before this into our schools and offices. It will not be expected that the student be ignorant of his Multiplication Table, or that "two and two are four"—for that our children go to school. But as a hint, by way of introduction, it may be remarked, that in adding up, for instance, the numbers 5, 6 and 7, it is quite as easy to say 5, 11, 18, as it is to proceed in the old-fashioned way: 5 and 6 are 11 and 7 are 18, and considerably quicker and more to the purpose as all will acknowledge. Here are but three simple rules, contained in a few words,

which put the reader at once in possession of all the means which will enable him, with some practice, to acquire the same expeditious way of computing numbers most accurately, of which he may have seen an example at Barnum's American Museum.

RULE I.—Commence at the bottom, run to the top and down again. In no case set down the carrying figure until you arrive at the bottom, and then set down both results. Make use of the hint thrown out in the Preface; that is, if you have to add the following numbers: 2, 9, 7, 4, 8, 3, 1, 6, do it in this manner: 2, 11, 18, 22, 25, 33, 34, 40.

RULE II.—Commence at the top, run down to the bottom, up again and down again, and so on until the computation is completed.

RULE III.—In computing a column composed, for instance, of these figures, 9, 3, 4, 6, 5, 6, 4, 3, connect two figures in your mind and proceed thus: 17, 27, 38, 45—9 and 8 being 17, 4 and 6 being 10, 5 and 6, 11—and so on, treating these single results in the way indicated in Rule I.

These rules will aid you very materially in gaining rapidity. You will now commence your study in good earnest.

Supposing you to be very familiar with the results of every two figures up to 20, you will then sit down quietly and compute on your slate every two figures between 20 and 30, thus: 20 and 1, 20 and 2, 20 and 3, up to 20 and 9; then again, 21 and 1, 21 and 2, 21 and 3, up to 21 and 9, until you arrive at 29 and 9, impressing, as you proceed, each count upon your mind until you are perfect. You will then go through the same process with the figures between 30 and 40, which done, set down six columns of the figure two, with 6 in each column; the same of the figures 3, 4, 5, 6, 7, 8, and 9, and compute each until you are rapid and accurate in every one.

You will now practice the three following examples twelve times, according to Rule I., six times as indicated in Rule II., and six times according to Rule III., gaining rapidly at each successive trial:

879	567	745
542	768	484
363	699	363
685	454	576
456	565	662
947	646	291

Having done this, compute on your slate from 40 to 50 as before, and again from 50 to 60; after which practice the three following examples, according to Rule I., ten times; Rule II., twelve times; and Rule III.

ten times; and you will discover more ease and rapidity in your computation than you have ever before enjoyed:

967	787	478
967	787	874
967	999	787
976	579	666
858	468	599
989	378	489
887	796	379

Resume now your practice with the figures between 60 and 70, 70 to 80, 80 to 90, 90 to 100. Having thus gone over the whole addition table, you will be familiar with every combination of figures in it. Then practise the three following examples as follows: Rule I., twenty times; Rule II., fifteen times; Rule III., twenty times; and you will be astonished at your rapidity:

2222	8767	998769
3333	4579	876879
4444	9969	787987
5555	8888	859786
6666	7777	674875
7777	6666	467987
8888	5432	896754
9999	7654	979886

MULTIPLICATION.

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PROCESS—TWO FIGURES.—Units into units will give first figure; units into tens and tens into units will give second figure; tens into tens will give third figure.

PROCESS—THREE FIGURES.—Units into units will give first figure; units into tens and tens into units will give second figure; units into hundreds and hundreds into units, and tens

into tens added, and multiplied with the carrying figure, will give third figure; tens into hundreds and hundreds into tens will give fourth figure; hundreds into hundreds will give fifth figure.

74,936

Always observe great care in carrying.

SECRET FOR BOOK-KEEPERS.

In the practice of book-keepers to transfer whole columns of sums from the Day Book to the Ledger, etc., etc., it will frequently be found,

that, after adding up the columns in the two books, the sum-total differs. Now, when such is the case, and the book-keeper wishes to ascertain whether the mistake has been made in the computation or in the extension of the single counts, he has but to subtract the lesser sum total from the larger, and divide by 9. If there be a remainder, the mistake is made in the computation; if not, it lies in the extension of the single counts, which then must be compared. For instance:

376	376	376	376
482	482	482	482
190	100	190	190
397	397	397	397
454	454	454	454
132	123	132	132
654	654	654	654
323	323	323	323
875	875	875	875
950	905	950	950
4833	4693	4833	4843
4698			4833
9)135(15		9)10(1	
9		9	
45			1 Remainder,
45	No remainder,		which proves the com-
which proves the computation correct.			putation incorrect.

Rule of Addition for Two Columns.

32
43
56 24 and 6 = 30 and 50 = 80 and 3 = 83 and 40 = 123 and
24 2 = 125 and 80 = 155.

155

Rule of Addition for Three Columns.

223
320
234 20 and 34 = 54 and 5 = 554 and 2 = 754 and 20 = 774
520 and 3 = 1074 and 23 = 1097 and 2 = 1297.

1297

These methods I consider quite expeditious and extremely simple, and consequently very valuable to all minds.

CERTIFICATE OF EDWARD EVERETT, AND OPINIONS
OF THE PRESS.

Mr. Hutchings has exhibited to me a specimen of his skill in
Arithmetical Calculation, which is very remarkable.

EDWARD EVERETT.

Boston, 22d July, 1862.

[*From the New York Tribune, April 19.*]

A PHENOMENON.—This is not a gift, but a scientific process, which
he can impart to pupils. It will be of immense advantage in trade,
commerce, and science, and revolutionize the tedious mode of addition
throughout the world.

[*From the Scientific American.*]

We have examined his processes, and are satisfied that almost any
of our intelligent accountants, who are pretty quick at figures, might
learn to calculate with nearly the same rapidity.